Mariposa Public Utility District

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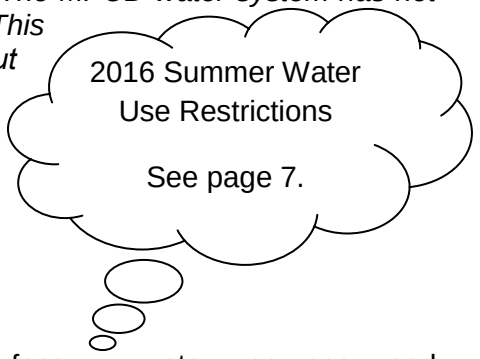
2015 CONSUMER CONFIDENCE REPORT
STATE WATER SYSTEM #2210001

Last year, water met all USEPA and State drinking water health standards. The MPUD water system has not violated a maximum contaminant level or any other water quality standard. This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.



The MPUD surface water sources include Stockton Creek Reservoir and the Merced River as a secondary source. All surface water is treated at the new Surface Water Treatment Facility (SWTF) (completed in July 2013) which includes a solids contact clarifier, two ultra-filtration membrane filter racks, two granular activated carbon (GAC) vessels, and gas chlorination and corrosion control treatment.

The water system also utilizes ground water pumped from three active hard rock wells (Wells: IW #1, IW #7, and MPUD #6) as part of the system source capacity. MPUD provides continuous chlorination of the groundwater pumped from active hard rock wells, which is necessary since it is blended with treated surface water.

There are two 1.0-million gallon and one 72,000 gallon capacity treated water storage tanks in the distribution system.

During the calendar year of 2015, the District used 97,096,990 gallons of surface and ground water. 59,595,072 gallons was pumped from the Merced River to Stockton Creek Reservoir. 53,368,180 gallons was supplied from Stockton Creek Reservoir blended with Merced River water. 46,728,810 gallons of water was pumped from ground water sources. 52% of the water was supplied from surface water sources and 48% from ground water sources.

MPUD treats and tests water according to the State Water Resources Control Board and USEPA regulations. District staff includes five employees certified in the operation of water treatment facilities, four employees certified in water distribution and at least one employee certified as a Laboratory Analyst. District staff is on duty 8-9 hours a day, 7 days a week. There is an MPUD employee on call 24 hours per day. The emergency (water and wastewater only) pager phone access number is **209-742-2800**.

MPUD provides water, wastewater, and fire protection services to the general area of the Mariposa town basin. MPUD is a Special District, independent of Mariposa County government. The MPUD legislative body is made up of five Directors elected at large by registered voters residing in the District with individual Directors serving four-year terms. The Board of Directors regular meetings are held the first Tuesday of each month in the MPUD office at 4992 Seventh Street at 6:30 PM. The members of the Board include: Bill Bondshu, Larry Enrico, Dana Finney, Bob McKnight, and David Radanovich. The 2016 Board Chairman is Larry Enrico. The General Manager is Mark Rowney. For more information contact the MPUD

administrative office at 966-2515.

An assessment of the drinking water source(s) was completed in April 2003. The source(s) are considered most vulnerable to the following activities not associated with any detected contaminants: transportation corridors – freeways/state highways; transportation corridors – road right-of-ways [herbicide use areas]; septic systems – high density [>1/acre]; automobile – gas stations; historic gas stations; and wastewater treatment plants and disposal facilities.

Educational Information - The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.

- Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.

- In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLS) as is economically and technologically feasible. Secondary MCLGs are set to protect the odor, taste, and appearance of drinking water.
Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).
Public Health Goal (PHG): The level a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Variances and Exemptions: State Board permission to exceed a MCL or not comply with treatment technique under certain conditions.
ND: not detectable at analysis minimum reporting limit.
ppm: parts per million or milligrams per liter (mg/L)
ppb: parts per billion or micrograms per liter (µg/L)
ppt: parts per trillion or nanograms per liter (ng/L)
ppq: parts per quadrillion or picogram per liter (pg/L)
pCi/L: picocuries per liter (a measure of radiation)

The following tables list drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows the District to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Many other water analyses are completed, however not reported if results were not detectable.

SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER
(Sample Taken from Customer Tap)
Monitoring for August 2015 – next monitoring required 2018
However, the District has scheduled additional monitoring in August 2016.

Lead and Copper (reporting units)	**MCL**	**PHG**	**Average**	**Range**	**Violation**	**Typical Source of Contaminant**
Lead (ppb)	AL=15	0.2	ND	20 sites sampled; 0 sites over action level	No	Internal corrosion of household plumbing systems, discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)	AL=1.3	0.3	0.430	20 sites sampled; 0 sites over action level	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. MPUD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/lead.

SAMPLING RESULTS FOR SODIUM AND HARDNESS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	2015	3.1 – 9.3	None	None	Salt present in the water and is generally naturally occurring.
Hardness as $CaCO_3$ (ppm)	2015	35-210	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring.

SAMPLING RESULTS FOR DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCTS PRECURSORS						
Contaminant (and reporting units and sample date)	**MCL**	**PHG (MCLG)**	**Average**	**Range**	**Violation**	**Typical Source**
TTHMs – Total Trihalomethanes (ppb) 2015	80	N/A	58	26-58	No	By-product of drinking water disinfection.
Haloacetic Acids (ppb) 2015	60	N/A	36	21-36	No	By-product of drinking water disinfection.
Chlorine Free Cl (ppm) 2015	MRDL = 4.0	MRDL G = 4	.59	.55-.59	No	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Control of DBP precursors (TOC) (ppm) 2015	Should exceed 1.0	N/A	1.94	1.08-1.94	No	Total organic carbon (TOC) has no health effects; however, total organic carbon provides a medium for the formation of disinfection by-products. The by-products include trihalomethanes (TTHMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver of kidney problems, or nervous system effects, and may lead to an increased risk of cancer.

***Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.*

SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique[a] (type of approved filtration technology used)	Ultra Filtration Membranes
Turbidity Performance Standards[b] (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to .1 NTU in 95% of measurements in a month 2 – Not exceed 1 NTU for more than eight consecutive hours 3 – Not exceed 2 NTU at any time
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1	100%
Highest single turbidity measurement during the year	0.010 NTU
The number of violations of surface water treatment requirements	None

(a) A required process intended to reduce the level of a contaminant in drinking water.
(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance.
Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Surface Water Stockton Creek	Surface Water Merced River	Ground Water Wells IW #1 & #7	Ground Water Well MPUD #6	Typical Source of Contaminant
Inorganic Contaminants							
Hexavalent Chromium ppb	10	0.02	ND (Sampled on 12-8-14)	ND (Sampled on 12-8-14)	ND-.30 (Sampled on 12-8-14)	.21 (Sampled on 12-8-14)	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate, (as Nitrate, NO_3) ppm	45	45	ND (Sampled on 5-20-15)	ND (Sampled on 5-20-15)	8.4 & 7.0 (Sampled on 5-20-15)	4.9 (Sampled on 5-20-15)	Runoff from fertilizer leaching from septic tanks, erosion of natural deposits
Radioactive Contaminants							
Gross Alpha Particle Activity pCi/L	15	(0)	0.605 (Sampled on 8-28-07)	0.528 (Sampled on 8-28-07)	ND (Sampled on 7-23-14)	ND (Sampled on 4-7-14)	Erosion of natural deposits.

DETECTION OF CONTAMINANTS WITH SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**MCL**	**Surface Water Stockton Creek**	**Surface Water Merced River**	**Ground Water Wells IW #1 & #7**	**Ground Water Well MPUD #6**	**Typical Source of Contaminant**
Sulfate as SO_4 mg/L	500	3.7 (Sampled on 5-20-15)	ND (Sampled on 5-20-15)	17 (Sampled on 5-20-15)	19 (Sampled on 4-7-14)	Runoff/leaching from natural deposits; industrial wastes
Chloride ppm	500	2.4 (Sampled on 5-20-15)	1.1 (Sampled on 5-20-15)	7.8 & 7.1 (Sampled on 5-20-15)	6.0 (Sampled on 4-7-14)	Runoff/leaching from natural deposits; seawater influence
Specific Conductance µS/cm	1600	86 (Sampled on 5-20-15)	24 (Sampled on 5-20-15)	410-430 (Sampled on 5-20-15)	420-480 (Sampled on 4-7-14)	Substances that form ions when in water; seawater influence
Total Dissolved Solids (TDS) ppm	1000	50 (Sampled on 5-20-15)	14 (Sampled on 5-20-15)	260 (Sampled on 5-20-15)	280 (Sampled on 4-7-14)	Runoff/leaching from natural deposits
Turbidity – Groundwater only, NTU	5	See page 5	See page 5	Range .049 - .096	Range .050 - .097	Soil runoff
Color units	15	10 (Sampled on 5-20-15)	10 (Sampled on 5-20-15)	ND (Sampled on 5-20-15)	ND (Sampled on 4-7-14)	Naturally-occurring organic materials
Odor T.O.N.	3 units	1.3 (Sampled on 5-20-15)	ND (Sampled on 5-20-15)	ND (Sampled on 5-20-15)	ND (Sampled on 4-7-14)	Naturally-occurring organic materials
Langelier Index @ 60°C Si		-1.4 (Sampled on 5-20-15)	-3.0 (Sampled on 5-20-15)	-0.29 & -0.27 (Sampled on 5-20-15)	0.38 (Sampled on 4-7-14)	
Iron ** ppb	300	Range 20-50	Range 20-50	ND (Sampled on 5-20-15)	ND (Sampled on 4-7-14)	Leaching from natural deposits; industrial wastes
Manganese ** ppb	50	Range 6-29	Range 6-29	ND (Sampled on 5-20-15)	ND (Sampled on 4-7-14)	Leaching from natural deposits.

** Surface water after treatment

Manganese is a secondary drinking water standard. Contaminate limit is a guideline for aesthetic quality – not an adverse affect on public health.

The Mariposa Public Utility District (MPUD) Board of Directors adopted Resolution No. 2016-1833 at their regular meeting held June 7th, 2016 declaring that a water shortage of District water sources exists in California and implementing Amended Ordinance #52 – Water Use Restrictions, Stage 1 (reduced from previous implementation of Stage 2, May 2015.

MPUD customers are requested to voluntarily reduce water use by 25% over 2013 levels.

2016 Water Use Restrictions - Stage 1

Excerpt from *Amended Ordinance #52, Prohibition of Nonessential Water Use*

SECTION 4: **Water Use Restrictions – Stage 1**

During a Stage 1 - Drought Response condition, the following uses of public water supply is prohibited:

A. Use of water from hydrants for construction purposes, fire training or any use other than the uses required for the proper maintenance of the public water distribution and wastewater collection systems by district staff.

B. Use of public water through any meter when the consumer has been given ten (10) days notice to repair one or more leaks and has failed to achieve such repairs.

C. Out of District water sales via mobile water transport vehicles.

D. Use of public water for out of district fire suppression purposes after declaration of containment.

E. Washing of sidewalks, walkways, driveways, parking lots, tennis courts, and all other hard-surfaced areas by hosing or by use of water directly from faucets or other outlets, except it is not unlawful to wash such areas from water contained in a bucket or container not exceeding three-gallon capacity.

F. Service of water in glasses, cups, or other containers by restaurants to customers, except upon prior request of such customers.

G. Irrigation of residential and commercial landscape between the hours of 8:00 a.m. and 6:00 p.m.

H. The use of any hand-held hose not equipped with an automatic positive shut-off nozzle to water landscaped areas located on residential and commercial properties.

I. Irrigation of nursery and commercial grower's products between the hours of 8:00 a.m. and 6:00 p.m. Watering is permitted at any time with a hand-held hose equipped with a positive shut-off nozzle, a bucket, or when a drip/micro-irrigation system/equipment is used. Irrigation of nursery propagation beds is permitted at any time.

J. Operation of ornamental water features without re-circulating water systems.

K. The use of any hand-held hose not equipped with an automatic positive shut-off nozzle to wash any equipment outside of structures, including motor vehicles, trailers, tractors etc.

L. The application of public water on any premises in a manner that results in such water flows to, non-irrigated areas, adjacent properties, private and public walkways, roadways, parking lots and structures.